An Android Application to Evaluate Piano Playing Using Fast Fourier Transform (FFT) Algorithm

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Abstract: Sight reading is one of six skills in reading music notation from tablatures which is quite difficult and requires a training process that is long enough to be studied by the pianist. The other five skills are ear training, rhythm training, improvisation, and memorization technique. Lack of sight reading skill can lead to errors in playing the piano. The purpose of this study is to design and to create an Android Application to evaluate piano playing using Fast Fourier Transform algorithm for users who are learning piano. The Fast Fourier Transform is an algorithm to compute the Discrete Fourier Transform and used for the calculation engine that performs a calculation Fourier complex. This algorithm is also used to transform a voice signal into a frequency signal, which means it is capable in converting voice signals into frequency signals, recording piano, and to compare the piano recordings with the original piano playing that already exists within the application.

Keywords: Sight reading, android, fast Fourier transform algorithm